Measuring capsule heat meter type 4.1.1

Precise measurement even for small flow quantities: Really easy. By radio. Without entering the apartment.

The type 4.1.1 is the newest generation of Techem measuring capsule heat meter. It combines calculator, volume measuring unit and temperature sensor in one. In the radio 4 device version, the consumption data determined are transmitted by radio.

In a nutshell

- Installation location (inlet/outlet) programmable during installation
- Approved for overhead installation, easy-to-install measuring capsule design
- Cable of the inlet temperature sensor optional up to 6 m in length
- Reading flexibility with radio telegrams in accordance with the OMS (Open Metering System) standard
- OMS certificated telegram configurable
- Secure data transfer by encryption and CRC method
- MID approval (Measuring Instruments Directive)
- The basis for measuring accuracy is water quality according to the working sheet AGFW FW 510 and VDI 2035

radio 4

M-bus

More IQ per °C

The measurement capsules' calculator offers a wealth of display functions, such as energy, due date, energy status on the due date, flow, inlet and outlet temperatures, temperature difference, power, volume as well as cyclic self-test and diagnostic displays for the flow direction and temperature sensor installation. More intelligence does not fit into a measuring capsule of this format!

Heat meter type 4.1.1 radio 4

The type 4.1.1 radio 4 is activated for radio use and following installation automatically sends the read out consumption data by radio transmission directly from the apartment. The data is encrypted.

Heat meter type 4.1.1 M-Bus

The version with M-Bus interface is fully networkable, corresponding to DIN EN 1434 (300 and 2,400 Baud), secures remote access to the counter data and, thanks to multiple reading frequencies, is suitable for technical control applications.

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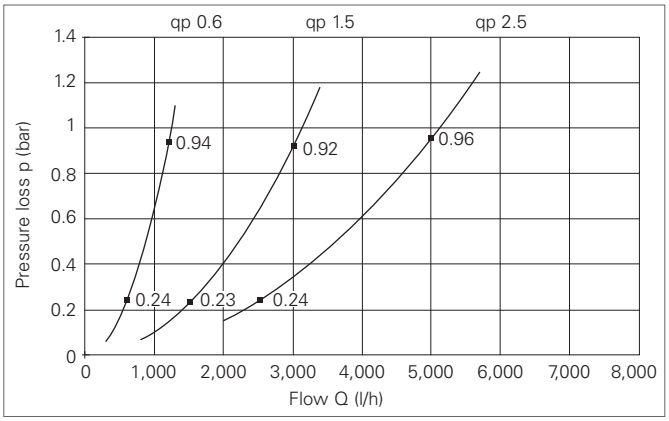
Technical data Main meter

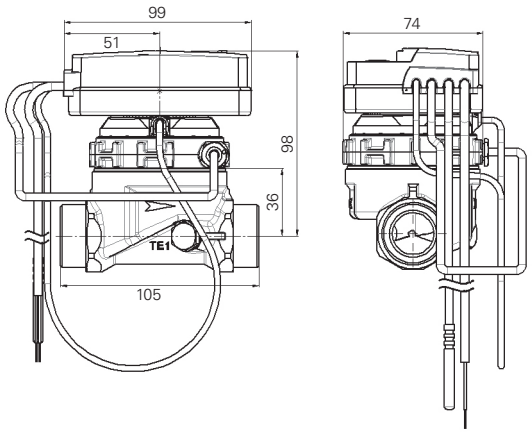
Nominal flow rate qp	(m^3/h)	0,6	1.5	2.5
Maximum flow qs	(l/h)	1,200	3,000	5,000
Minimum flow qi	(l/h)	6	15	25
Startup horizontal	(l/h)	2.5	4	6
Startup vertical	(l/h)	6	12	15
Pressure loss at qp	(bar)	0.24	0.23	0.24
Pressure loss at qs	(bar)	0.94	0.92	0.96
Kvs-values (Δp = 1 bar)	(l/h)	1,850	3,270	5,050
Temperature of medium Θ_{Med}	(°C)	5 … 90		
Housing protection		IP54		
Nominal pressure PN	(bar)	16		
Connection thread on meter		Measuring capsule M62 x 2 optional: type Ista (2")		



Pressure loss graph for measuring capsule heat meters

Technical data Calculator and temperature sensor

Temperature range calculator Θ	(°C)	0 … 105
Temperature difference ΔΘ	(K)	3 … 102
Consumption calculation ΔΘ	(K)	from 0.3
Ambient temperature Θ	(°C)	5 … 55
Environmental conditions		E1 + M1, class C
Power supply		5 years + reserve
Protection class		IP54



Dimensional sketch of measuring capsule heat meter

Technical data radio

Radio mode		unidirectional Standard: Mode C1 according to OMS V4
Radio data transmission		Standard: – Annual due date (as OMS data point) – Consumption data from 12 mid-month and end of the month values – Status information
Operating frequency	(MHz)	868.95
Transmission power	(W)	0.005 ... 0.010
Transmission period	(sec)	up to 0.014
CE conformity		according to Directive 2014/53/EU (RED)
Data security		Encryption according to OMS standard; recognised by BSITR-03109
Future-proof design		prepared for EED (Directive 2012/27/EU)

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